Abstract

A birefringent device of substantially uniform thickness less than about 10 microns, and being suitable for operating in a wavelength range about a central wavelength is disclosed. The device includes a base substrate, a layer of periodic index regions of alternating refractive indices applied to a first surface of the base substrate, and a cap substrate located substantially adjacent to the layer distal to the base substrate. The layer of periodic index regions has a periodicity of less than the central wavelength. The device being suitable to produce an arbitrary phase retardation between 0 and 2Π phase.